

# Work Order ID 71646

Thursday, July 07, 2011 12:03:26 PM

Page 1

Item ID: D212-664-101TRN

Accept

Setup Start

Revision ID: U/R

Stop

Item Name: Crosstube Turning Detail

Start Date: 7/7/2011 Start Qty: 1.00

Cust Item ID:

Required Date: 7/20/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan: CL

Date: 11/07/07

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D212-664-141

Rev D U/R

100

0.00



Mori Seiki

MORI SEIKI CNC LATHE LARGE

Memo

0.00

Mori Seiki CNC Lathe Large

1-Fill tube with sand & install plugs DT8534 on both ends as per Folio FA113

2-Turn first side as per Folio FA113

3-Blend transition lines only, \*\*do not sand whole tube\*\*:

\*Use mill bastard file, brush file repeatedly with file card.

\*Do not use sandpaper coarser than 320 grit.

110

QC1- Inspect dimensions to dimension sheet

0.00



QC

Memo

0.00

Quality Control

*mm.l* 11/08/11

*(P)*  
*mm.l* 11/08/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Thursday, July 07, 2011 12:03:26 PM

[illegible]**Setup Start**

**Stop**



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1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.

2. The second step is to gather relevant information and data. This can involve research, consultation with experts, or collecting data from various sources.

3. The third step is to analyze the information and data collected. This involves identifying patterns, trends, and relationships that can help in understanding the problem.

4. The fourth step is to develop a solution or answer. This involves applying the knowledge and skills gained from the previous steps to create a response that addresses the problem.

5. The fifth step is to evaluate the solution or answer. This involves checking the results against the original problem and requirements to ensure that the solution is effective and accurate.

6. The sixth step is to communicate the solution or answer. This involves presenting the findings in a clear and concise manner that is easy for others to understand.

7. The seventh step is to reflect on the process and results. This involves thinking about what was learned from the experience and how it can be applied to future problems.

8. The eighth step is to seek feedback and improvement. This involves asking others for their thoughts on the solution and using that feedback to make improvements.

9. The ninth step is to document the process and results. This involves creating a record of what was done and the outcomes, which can be useful for future reference.

10. The tenth step is to share the solution or answer. This involves making the results available to others who may be interested or who can benefit from the findings.

**Customer:**

## Run Start



**Stop**



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

[illegible]

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 71646**

Thursday, July 07, 2011 12:03:26 PM



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Item ID: D212-664-101TRN

Accept



Setup Start



Revision ID: U/R

Stop



Item Name: Crosstube Turning Detail

Start Date: 7/7/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 7/20/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150  HandFXtube	Crosstubes Chemical Conversion	0.00							
	Memo	0.00	JW	11-08-15					
160  QC	QC3- Inspect Part Finish	0.00							
	Memo	0.00	DP	11-8-15					
170  Packaging	Packaging	0.00							
	Memo	0.00	DP	11-8-15					
	Identify and Stock in kanban rack Location: 46								

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 71646**

Thursday, July 07, 2011 12:03:26 PM



Page 4

Item ID: D212-664-101TRN

Accept



Setup Start



Revision ID: U/R

Stop



Item Name: Crosstube Turning Detail

Start Date: 7/7/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 7/20/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/8/11

CL1108115

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Thursday, July 07, 2011 12:03:23 PM

Page 1

Work Order ID: 71646



Parent Item: D212-664-101TRN



Parent Item Name: Crosstube Turning Detail


Start Date: 7/7/2011

Required Date: 7/20/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 08-03-06 new issue DD verified by:ec  
IPP Rev B 08.04.02 removed Polish EC verified by: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6005-128 		Manufactured	No			120	Each	0.0000	1	1			

Crosstube Material



B67797

1 mm.l 11/08/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	71646
<b>Description:</b> Crosstube Assembly (205/212/412 High Fwd)		<b>Part Number:</b>	D212-664-141
<b>Inspection Dwg:</b> D212-664-141 <b>Rev:</b> D		<b>Page 1 of 1</b>	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

	Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	0.200	+/-0.010	.200	✓		vern	JF-01
	R0.063	+/-0.010	.063	✓		RG	
	2.740	+0.005/-0.000	2.745	✓		mic	CNC-04
	5.097	+/-0.030	5.070	✓		vern	JF-01
	2.304	+0.005/-0.000	2.308	✓		mic	CNC-01
	2.340	+0.005/-0.000	2.344	✓		✓	
	2.398	+0.005/-0.000	2.403	✓		✓	
	2.448	+0.005/-0.000	2.453	✓		✓	
	2.498	+0.005/-0.000	2.503	✓		✓	
	2.549	+0.005/-0.000	2.553	✓		✓	
	2.599	+0.005/-0.000	2.603	✓		✓	
	2.671	+0.005/-0.000	2.675	✓		✓	
	2.701	+0.005/-0.000	2.705	✓		✓	
SIDE B	0.200	+/-0.010	.200	✓		vern	JF-01
	R0.063	+/-0.010	.063	✓		RG	
	2.740	+0.005/-0.000	2.744	✓		mic	CNC-04
	5.097	+/-0.030	5.082	✓		vern	JF-01
	2.304	+0.005/-0.000	2.308	✓		mic	CNC-04
	2.340	+0.005/-0.000	2.344	✓		✓	
	2.398	+0.005/-0.000	2.403	✓		✓	
	2.448	+0.005/-0.000	2.453	✓		✓	
	2.498	+0.005/-0.000	2.508	✓		✓	
	2.549	+0.005/-0.000	2.553	✓		✓	
	2.599	+0.005/-0.000	2.603	✓		✓	
	2.671	+0.005/-0.000	2.675	✓		✓	
	2.701	+0.005/-0.000	2.705	✓		✓	
	126.514	+/-0.020	126.515	✓		tape	mic-02

<b>Measured by:</b> MM. L. / [Signature]	<b>Audited by:</b> [Signature]	<b>Prototype Approval:</b>	N/A
<b>Date:</b> 11/06/11	<b>Date:</b> 11-8-15	<b>Date:</b>	N/A

Rev	Date	Change	Revised by	Approved
A	05.04.27	New Issue (P/O D412-664-101)	KJ/JLM	
B	06.03.15	Tolerance revised for 5.097 per Dwg Rev update	KJ/JLM	
C	07.05.28	Dwg Rev updated	KJ/JLM	
D	10.02.02	Dimension 126.514 was 126.51	KJ	[Signature]